1.0 PURPOSE OF AND NEED FOR ACTION

1.1 Purpose of Proposed Project

The purpose of the proposed action is to reduce the traffic congestion and distribution problems associated with the Louis B. Nunn (Cumberland) Parkway/Kentucky Route 80 through Somerset and to accomplish this in such a way that the resulting roadway can serve as a link in the I-66 interstate highway across southern Kentucky, if and when such a facility is constructed. The proposed project also would address those needs associated with local access and connectivity.

1.2 History and Legislation

The origin of a proposed northern bypass of Somerset can be traced back to the concept of a coast-to-coast interstate corridor known as the East-West Transamerica Corridor (I-66). The corridor extended from Virginia to southern California, with a portion of the corridor running across southern Kentucky. **(See Figure 1.*)***

In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) identified the East-West Transamerica Corridor as a "high priority" corridor on the National Highway System. As a result of ISTEA, a national feasibility study, the Transamerica Transportation Corridor Feasibility Study, was conducted on the Corridor. Indicators of feasibility included: engineering feasibility, economic and financial feasibility, impacts on the environment, energy, safety and demographics to name a few. A steering committee consisting of eleven states and the Federal Highway Administration (FHWA) provided technical direction to the study. At the completion of the study in 1994, it was concluded that the entire Corridor did not meet the economic feasibility criteria established for the study. However, the study did determine that further analysis could find some corridor segments to be feasible from a state or regional perspective. **[See Section 6, Reference 1]**

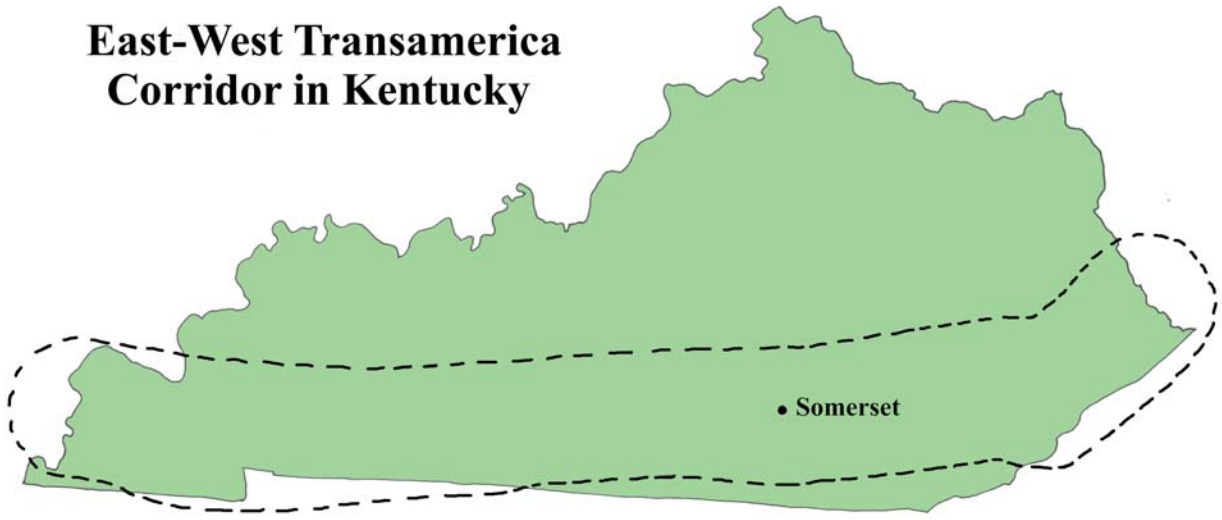

Figure 1

A subsequent study, the Southern Kentucky Corridor, Economic Justification and Financial Feasibility Study, performed in 1997 by the Kentucky Transportation Center (KTC) for the Kentucky Transportation Cabinet (KYTC) concluded that the portion of the Corridor crossing southern Kentucky was feasible. The study specifically identified the Somerset to London segment of the corridor as a priority segment, citing that it could provide economic development and quality-of-life benefits as well as employment opportunities for the corridor area counties. **[See Section 6, Reference 2]**

Subsequent to the KTC study, the Transportation Equity Act for the 21st Century (TEA-21) identified the Somerset to London segment as a high priority corridor and provided funding for its continued development. In 2000, the I-66 Southern Kentucky Corridor Scoping Study was completed. **[See Section 6, Reference 3]** This study compared a number of alternate corridors between Somerset and London and led to the selection of a northern corridor for further development. This northern corridor has been divided into two projects for continued study: the Somerset Northern Bypass (this project) and the remainder of the corridor east to London. **(See Figure 2.)**

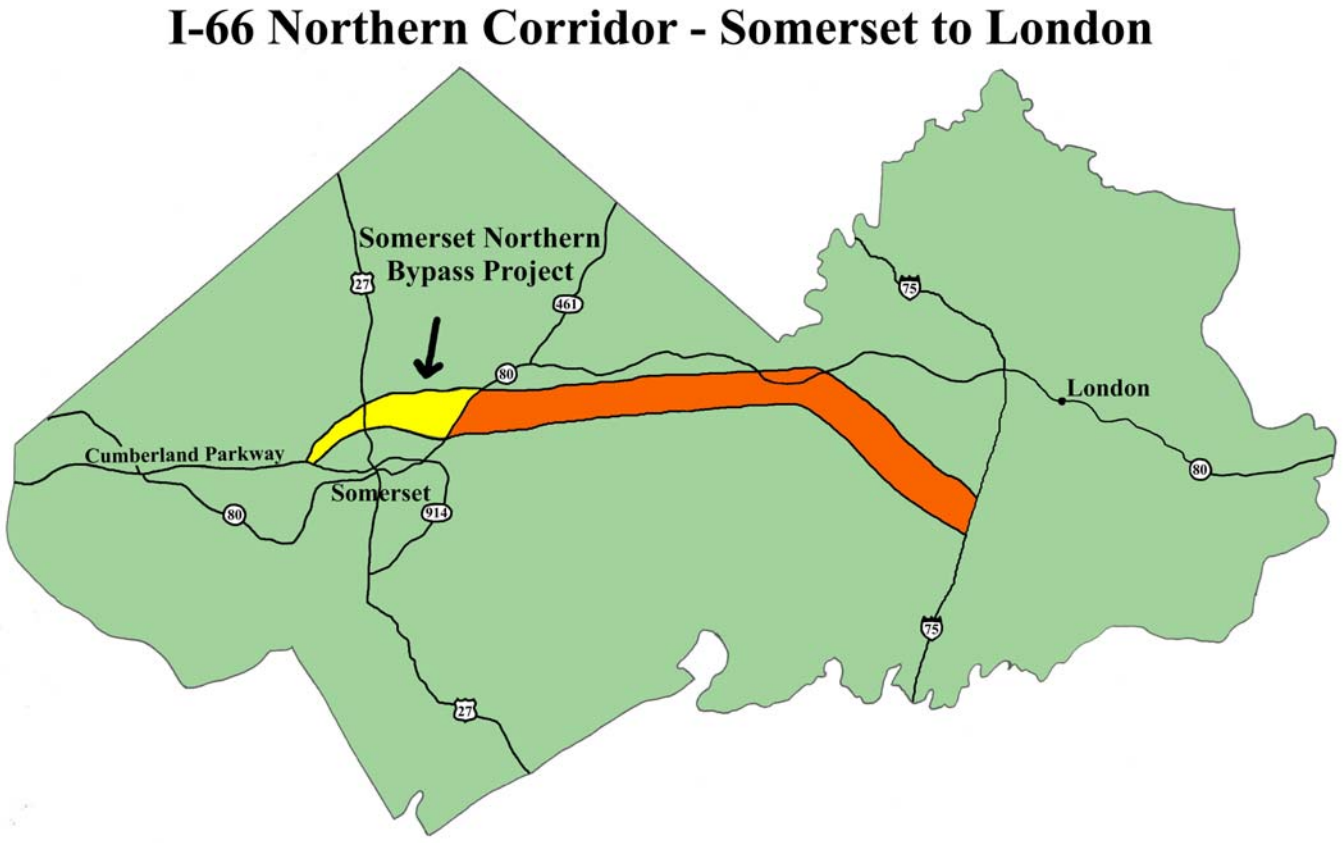

Figure 2

The Somerset Northern Bypass is included in the Kentucky Transportation Cabinet Six Year Highway Plan. Currently the project is scheduled for right-of-way acquisition and utility relocation in fiscal year 2003 with construction planned to begin in fiscal year 2004.

1.3 Project Description

The Federal Highway Administration (FHWA), in cooperation with the Kentucky Transportation Cabinet (KYTC) proposes to construct a northern bypass of Somerset, Kentucky. The project area lies in central Pulaski County. See Project Location Map, **Exhibit 1,** and Project Area Map, **Exhibit 2.**

1.3.1 Existing Facilities

The Louis B. Nunn (Cumberland) Parkway is an east-west, fully access-controlled, four-lane highway that begins at its intersection with I-65 near Park City, in south-central Kentucky, and extends easterly to its intersection with U.S. 27 in Somerset, Kentucky.

Kentucky 80 extends this four-lane facility through Somerset, beginning at the Cumberland Parkway/U.S. 27 intersection and continuing easterly toward London, Kentucky. In the project area, KY 80 is a partially access-controlled, four-lane highway.

Table 1 shows the design features of these existing facilities.

1.3.2 Proposed Improvement

The proposed project involves creating a four-lane, fully access-controlled facility, that would begin on the Cumberland Parkway at Fishing Creek just west of Somerset and extend easterly to KY 80 east of Somerset, bypassing Somerset on the north. The project would be constructed to interstate standards. **Table 1** and the typical section, **Exhibit 3**, show the design features of the proposed project.

The project study corridor for a northern bypass of Somerset is approximately one-half mile to three and one-half miles wide and approximately seven and one-half miles to thirteen miles in length. **Exhibit 2** shows the bypass study corridor within the project area.

An alternative to constructing a bypass of Somerset considered for this project was to upgrade existing Cumberland Parkway/KY 80 through Somerset to a fully access-controlled, interstate-type facility. **(See Exhibit 2.)** This would involve eliminating intersections and entrances along the route and adding interchanges and frontage roads to provide local access.

Exhibit 2 also shows two other projects proposed for the Somerset area: (1) the U.S. 27 Relocation and (2) the Southwest Bypass. These two projects are not a part of this study.

1.4 Logical Termini

The termini for this project are logical in that the proposed improvement would connect existing four-lane Cumberland Parkway just west of Somerset to existing four-lane KY 80 just east of Somerset, improving east-west travel and overall traffic patterns.

The proposed project has independent utility in that it is not dependent on, nor does it restrict the consideration of other reasonably foreseeable highway improvements in the area, including I-66 to the east. This proposed improvement can function effectively, whether or not the I-66 interstate system across southern Kentucky is ever constructed.

1.5 Need for Proposed Project

The need for the proposed project is based on several factors that make the current transportation system inadequate. The following subsections address the need for the project.

- Traffic Volumes and Capacity
- Local Access and Connectivity
- System Linkage and Continuity
- I-66 Border to Border Goals

In addressing these needs, the proposed action seeks to comply with the legislative mandate described in **Section 1.2**.

1.5.1 Traffic Volumes and Capacity

Over the past 10 years, the population of the area in and around Somerset has grown rapidly. It has become a regional economic, education, healthcare, and tourism center, serving people throughout a ten-county area and beyond. Vacationers from across Kentucky and other states visit Somerset's Lake Cumberland resort area and other tourism sites. As a result of this growth, area roadways have become congested. Traffic on four-lane KY 80 has increased significantly, necessitating traffic signals at several intersections.

Increased traffic volumes have lowered the "level of service" of KY 80 and its intersecting roadways in Somerset. Level of Service (LOS) is a measure of traffic flow and maneuverability and is evaluated on a scale from A to F, with A representing the best range of operating conditions and F the worst. **Table 2** describes the Level of Service scale.

Interstate-type roadways are usually designed to function at a level of service such that the roadway is not operating at full capacity. Drivers should be able to maintain a relatively satisfactory speed but may, at times, be somewhat restricted in their ability to change lanes or pass. This level of service (LOS B) is what is being planned for this project.

Traffic data and analysis **[See Section 6, References 4 and 5]** have shown that some sections of KY 80 and its intersecting roadways in Somerset are already operating under heavy traffic loads. **Exhibit 4** shows 2002 traffic volumes for the highway network in the project area. As a result, vehicles are closely spaced, their speed is restricted and entering the traffic stream is difficult. In the projected design year of 2030, traffic volumes in these areas are expected to approach or exceed roadway capacities, leading to gridlock in the local roadway system. **Exhibit 5** shows 2030 projected traffic volumes and levels of service in the project area for the No-Build Alternative.

1.5.2 Local Access and Connectivity

There is a need to better distribute traffic movements in the Somerset area, such as providing better access to local facilities and services as well as industrial, commercial and residential areas, and to provide better connections to roadways radiating from the city. Presently, all vehicle traffic, including through-traffic, must enter the heavily developed area of Somerset, with its intersections and traffic signals, in order to connect with the other major roadways in the area.

1.5.3 System Linkage and Continuity

The proposed project would become a link in the I-66 interstate highway system across southern Kentucky, should that highway ever be constructed. As a result, this project must a) be built to interstate standards, ensuring continuity with the I-66 interstate system and b) meet the I-66 Border to Border Goals.

1.5.4 I-66 Border to Border Goals

As noted earlier, the proposed improvement is an independent project, but would become a link in the I-66 interstate highway across southern Kentucky, if and when such a facility is constructed. Because of this potential future role, it must address the goals set forth for I-66, as well as addressing the more local needs described above. These I-66 Border to Border Goals include:

1. Supporting the completion of I-66 across southern KY to carry out the legislative intent of the Intermodal Surface Transportation Efficiency Act (ISTEA), the 1995 National Highway System (NHS) Act, and the Transportation Equity Act for the 21st Century (TEA-21);

2. Providing an improved, efficient Interstate facility for systems continuity of I-66 from West Virginia to Missouri;

3. Improving accessibility throughout southern Kentucky to jobs, industry, urban centers, educational institutions, tourism, and recreational facilities with particular emphasis given to the Kentucky regions of Appalachian and the Lower Mississippi Delta areas; and

4. Improving interstate movement of freight and people by ensuring a safe transportation system that is accessible, integrated, and efficient while offering flexibility of transportation choices across southern Kentucky.